



**Solid State Devices, Inc.**

14701 Firestone Blvd \* La Mirada, Ca 90638  
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**SDA345**

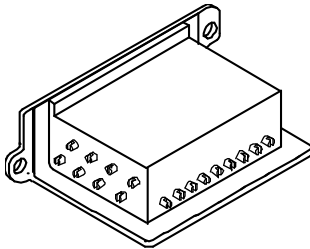
**ULTRA FAST RECOVERY  
 HIGH VOLTAGE ASSEMBLY**  
**Up To 18KV @ 250mA**  
 125KHz Operating Frequency

**Designer's Data Sheet**

**Part Number/Ordering Information 1/**

SDA345

- Screening 2/
- = Not Screened
- TX = TX Level
- TXV = TXV
- S = S Level



- FEATURES:**
- Designed For Use With High Voltage Switching Power Supplies
  - Discretes and Assemblies Screened to TX, TXV, or S Level
  - High Reverse Transient Energy Capabilities
  - Void Free, Hermetically Sealed, Metallurgically Bonded Discretes
  - Single Junction Discretes Provide Superior Thermal Properties Than Designs Using Multi-junction Discretes
  - Isolated Aluminum Heat Sink with Special Epoxy Encapsulation Provides Superior Power Dissipation
  - All Internal Devices are Matched & Selected
  - Unique Construction Techniques Guarantee 100% Corona Free Operation
  - Consult Factory for Higher Voltages and Currents and Alternate Bridge Configurations

MAXIMUM RATINGS PER LEG				ELECTRICAL CHARACTERISTICS PER LEG			
Rating <sup>1/</sup>	Symbol	Value	Unit	Characteristic <sup>1/</sup>	Symbol	Value	Unit
Peak Repetitive Reverse Voltage and DC Blocking Voltage	VRM(rep) Vr	3,000	Volts	Max. Full Cycle Forward Voltage Drop, Averaged Over Full Cycle <sup>6/</sup>	VF (AV)	2.85	Vdc
RMS Reverse Voltage	Vr	2,100	Volts	Max. Instantaneous Forward Voltage Drop <sup>2/</sup>	VF	5.7	Vdc
Half Wave Rectified Forward Current Averaged Over Full Cycle <sup>2/</sup>	Io	1	Amps	Max. Full Cycle Leakage Current Averaged Over Full Cycle <sup>8/</sup>	IR (AV)	100	µAdc
Peak Repetitive Forward Current <sup>3/</sup>	IFM(rep)	6	Amps				
Peak Surge Current <sup>4/</sup>	IFM(surge)	25	Amps	Max. Reverse Leakage Current <sup>9/</sup>	IR	5	µAdc
Operating & Storage Temperature	TJ, Tstg	-55 to +125	°C	Max. Junction Capacitance <sup>10/</sup>	CJ	4	pf
Reverse Recovery Time <sup>5/</sup>	trr	60	ns				

**NOTES:**

<sup>1/</sup> Unless Otherwise Specified, All Electrical Characteristics @25°C.

<sup>2/</sup> Resistive Load, 50Hz, Sine Wave, TC=25°C.

<sup>3/</sup> TC=55°C, 8.3ms Pulse, Allow Junction to Reach Equilibrium Between Pulses.

<sup>4/</sup> TC=55°C, 8.3ms Pulse, Superimposed on Rated Current at Rated Voltage.

<sup>5/</sup> Recovery Conditions: IF = 0.5 Amp, IR = 1.0 Amp rec. to .25 Amp, tested on each individual diode before assembly.

<sup>6/</sup> IO (MAX), 60Hz, Square Wave, TC = 55°C.

<sup>7/</sup> IF = 1 Adc, TC = 25°C, 300 µs Pulse.

<sup>8/</sup> Rated VR, 60Hz, Square Wave, TC = 100°C.

<sup>9/</sup> Rated VR, TC = 25°C.

<sup>10/</sup> VR = 100V, TC = 25°C.

**NOTE:** All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.

**DATA SHEET #: RA0072A**

**DOC**

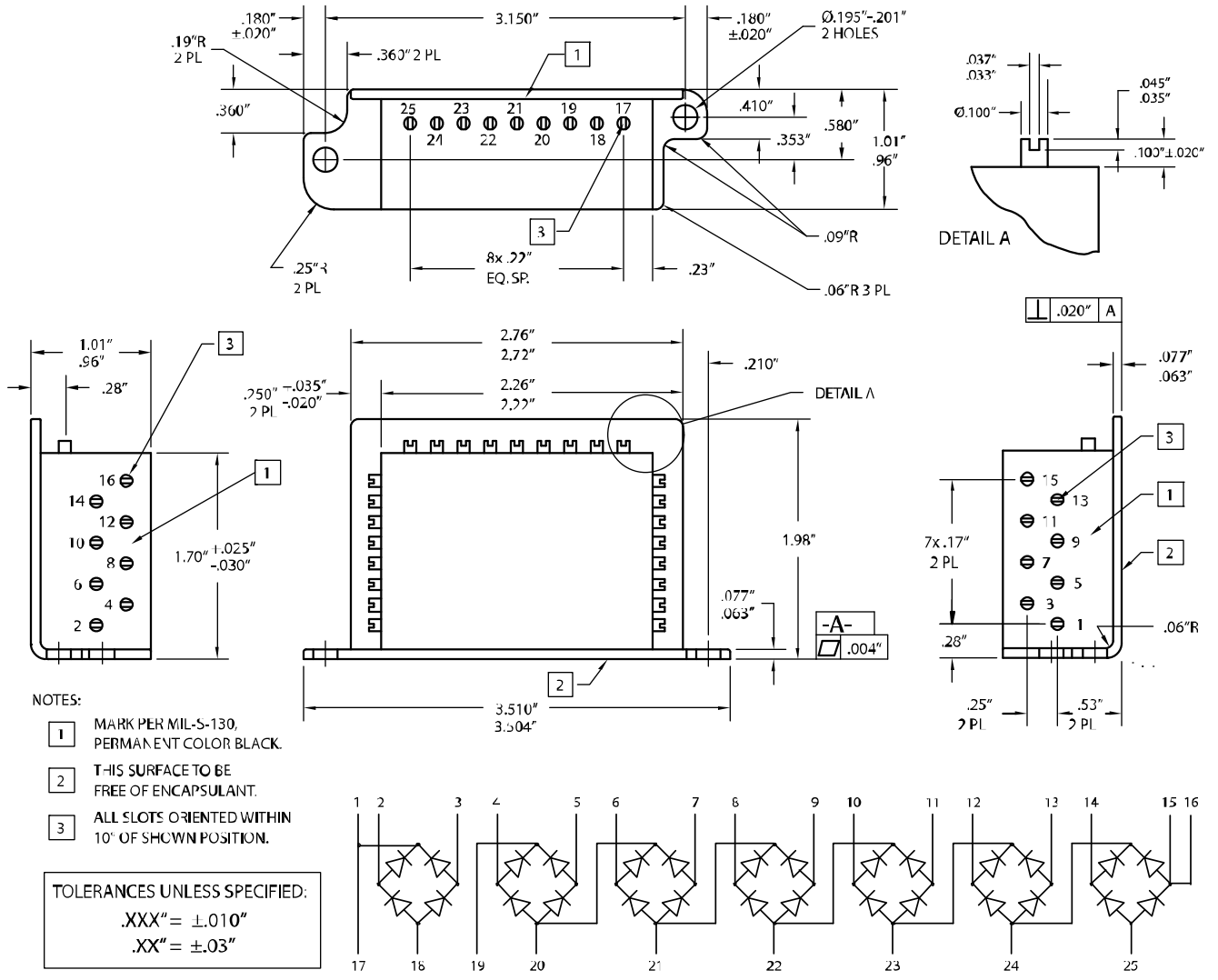


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# SDA345

## SDA345 OUTLINE and SCHEMATIC DRAWING:



### NOTES:

- 1 MARK PER MIL-S-130, PERMANENT COLOR BLACK.
- 2 THIS SURFACE TO BE FREE OF ENCAPSULANT.
- 3 ALL SLOTS ORIENTED WITHIN 10° OF SHOWN POSITION.

TOLERANCES UNLESS SPECIFIED:  
 .XXX" =  $\pm.010"$   
 .XX" =  $\pm.03"$

\*For information on curves, contact the Factory Representative for Engineering Assistance.